COARSE AND FINE ELECTRONIC BOW CORRECTION FOR A WRITER

Abstract of the Disclosure

A method and apparatus for increasing the linearity of elements within a printhead by applying a coarse electronic adjustment to rearrange the electronic printing of data into the proper pixel line and then applying a fine electronic adjustment to reduce the bow error to fraction of a pixel line. Delays of exposure control signals are used by the fine electronic adjustment to correct linearity by a fraction of a pixel line. The delays can be repeated to multiply the number of delays available and increase the linearity resolution. The delays can also be averaged between odd and even rows of elements to increase apparent resolution. The first embodiment employs digital circuitry to provide the fine adjustment of pixel data that is partially located on the interface board and partially located on the printhead substrate. This reduces the amount of circuitry placed within the ASICs on the printhead substrate. The fine adjustment circuitry of first embodiment provides multiple signals on a single circuit trace between the interface board and the printhead substrate, where each of the multiple signals is active at different times. The second embodiment places all the fine electronic adjustment onto the ASICs within the printhead substrate resulting in fewer interconnects between the interface board and the printhead substrate than the first embodiment.